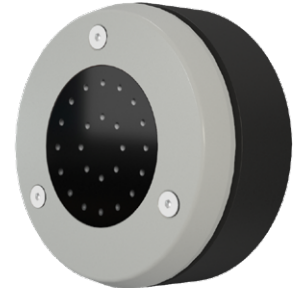


Checklist Sounder WM87/SM87/PKW21



Please fill out the checklist as completely as possible and send the PDF document to: info@tsl-escha.com
After checking the conformity of the checklist, you will receive a final article drawing in which the product is clearly described. In addition, you will receive an attractive offer according to your specifications. We will also be happy to complete the checklist together with you. Please call us if required: +49 2353/66796-0

The sounder is very versatile in its function. Digital signals can be processed more easily than audio data. The volume control (page 4) can be calibrated on the vehicle in order to achieve the corresponding standard values.
If you have any questions, please contact us.

CUSTOMER INFORMATION

Company:

Name:

Address:

Phone:

E-Mail:

Date:

Project:

Quantity:

Quantity 1. year:

Quantity 2. year:

Quantity 3. year:

Notes:

Product Highlights

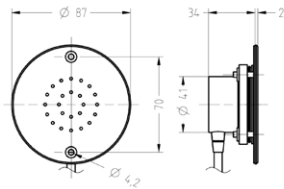
- Adaptive sound level adjustment on all side entry systems for rail vehicles
- Mounting outside or inside on the door area
- Robust housing technology, high degree of protection and wide operating temperature range
- Proven chemical resistance to many surface cleaners
- Can be mounted from the front side and comes equipped with a cable outlet for optional plugs
- Complies with the current standards for rail vehicles (EN 50155, EN 45545-2 and EN 61373)
- Up to seven different tones, melodies or voice outputs can be parameterized according to customer requirements
- Quick mounting
- the WM87 has an extremely flat surface (only 3 mm)
- Maintenance-free

1 CONSTRUCTION TYPE

Construction type 1

WM87 Ø87 mm

(With 2 mounting holes)



Maße ohne Toleranz in mm
Dimensions without tolerance in mm

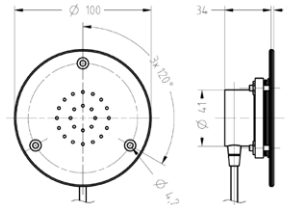
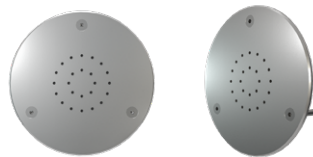
WM87



Construction type 2

WM87 Ø100 mm

(With 3 mounting holes)



Maße ohne Toleranz in mm
Dimensions without tolerance in mm

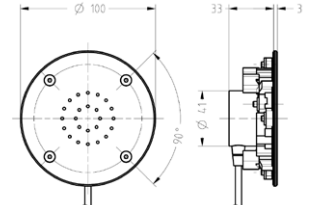
WM87-FA



Construction type 3

WM87-5 Ø100 mm

(Claw fastening, Wall thickness 1 - 8 mm)



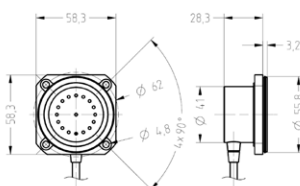
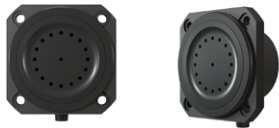
Maße ohne Toleranz in mm
Dimensions without tolerance in mm

WM87-5



Construction type 4 SM87

(For rear mounting acoustical openings to the front side required)

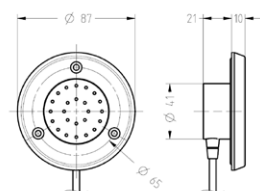
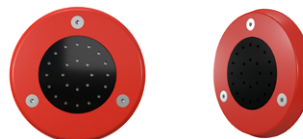


Maße ohne Toleranz in mm
Dimensions without tolerance in mm

SM87



Construction type 5 PKW21



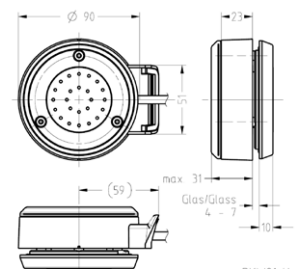
Maße ohne Toleranz in mm
Dimensions without tolerance in mm

PKW21



Construction type 6 PKW21-U

(glass installation one-sided)



Maße ohne Toleranz in mm
Dimensions without tolerance in mm

PKW21-U



2 FRONT PANEL (WHEN SELECTING THE CONSTRUCTION TYPE 1, 2 AND 3, **WM87**)

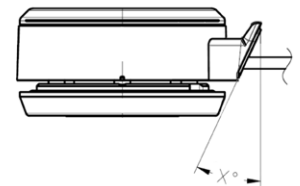
Stainless steel RAL-color or color shade on request Special painting specification

3 CABLE OUTLET (WHEN SELECTING THE CONSTRUCTION TYPE 6, **PKW21-U**)

Bottom Left Right

4 VARIABLE ADAPTATION TO THE DOOR PROFILE
(WHEN SELECTING THE CONSTRUCTION TYPE 6, **PKW21-U**)

Angle 0 ° Angle 6 ° Angle 10 ° Angle 15 ° Angle 25 °



5 GLASS THICKNESS (WHEN SELECTING THE CONSTRUCTION TYPE 6, **PKW21-U**)

Glass thickness 4-7 mm Glass thickness 8-13 mm Glass thickness mm

6 MOUNTING RING (WHEN SELECTING THE CONSTRUCTION TYPE 5 UND 6, **PKW21 UND PKW21-U**)

The mounting ring is made of plastic.

RAL 1023	RAL 2000	RAL 2003	RAL 2004	RAL 3020	RAL 5017	RAL 6024
RAL 7035	RAL 7042	RAL 7043	RAL 9004 RAL 9017	RAL 9016		

RAL-color or color shade on request

7 TONE SIGNALS*

Standard Signals

	Tone frequency (Hz)	Tone duration (MS)	Tone off (ms)	Interval (Hz) Impulse per sec.	Description
N1	2200 + 1760	200+200	100	2	Opening warning (EN 14752, TSI PRM)
N2	1900	62	62	8	Closing warning (EN 14752, TSI PRM)
N3	630	6	244	4	Door finding signal as single ton (TSI PRM)
N4	550 + 750	800	900	-	Door finding signal as dual ton (TSI PRM)* *Sounder with Wave function required

Digital signals

	Tone frequency (Hz)	Tone duration (MS)	Tone off (ms)	Intervall (Hz)	Description
F1					
F2					
F3					
F4					
F5					
F6					
F7					

Audio file provided by the customer (in wave format max. 100 kB)

	File name	Description
A1		
A2		
A3		
A4		
A5		
A6		
A7		

Function	In1	In2	In3	Tone Signals			
1	1	0			one time	permanent	times
				static volume	dynamic volume	initial volume (50 %)	%
2	0	1			one time	permanent	times
				static volume	dynamic volume	initial volume (50 %)	%
3	1	1			one time	permanent	times
				static volume	dynamic volume	initial volume (50 %)	%

Function	In1	In2	In3	Tone Signals			
4	0	0	1		one time	permanent	times
				static volume	dynamic volume	initial volume (50 %)	%
5	1	0	1		one time	permanent	times
				static volume	dynamic volume	initial volume (50 %)	%
6	0	1	1		one time	permanent	times
				static volume	dynamic volume	initial volume (50 %)	%
7	1	1	1		one time	permanent	times
				static volume	dynamic volume	initial volume (50 %)	%

8 NOMINAL VOLTAGE

24 VDC

36 VDC

72 VDC

110 VDC

VDC

9 CONNECTION PLUG

65) TE Mini-Universal MATE-N-LOK
TE 794895-1 **6 pole** (IP56/IP57)



51) WAGO 721-605 WAGO 721-
605/000-044/033-000 **5 pole**



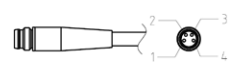
52) WAGO 769-105
5 pole(IP56/IP57)



64) TE Mini-Universal MATE-N-LOK,
TE 794805-1 **4 pole** (IP56/IP57)



60) ESCHA M8/Ø8 Snap
(max. 60 VDC) SSFP4 **4 pole** (IP68)



8A) with wire-end sleeve

Customer specific

PIN ASSIGNMENT

PIN 1:	Vin
PIN 2:	In1
PIN 3:	GND
PIN 4:	In2
PIN 5:	In3
PIN 6:	---

10 CONNECTION LINE

[ACCORDING TO EN 45545-2 AND UN/ECE R118]

L = ca. 90 mm

L = mm